

Product Development Overview

FIG - 1

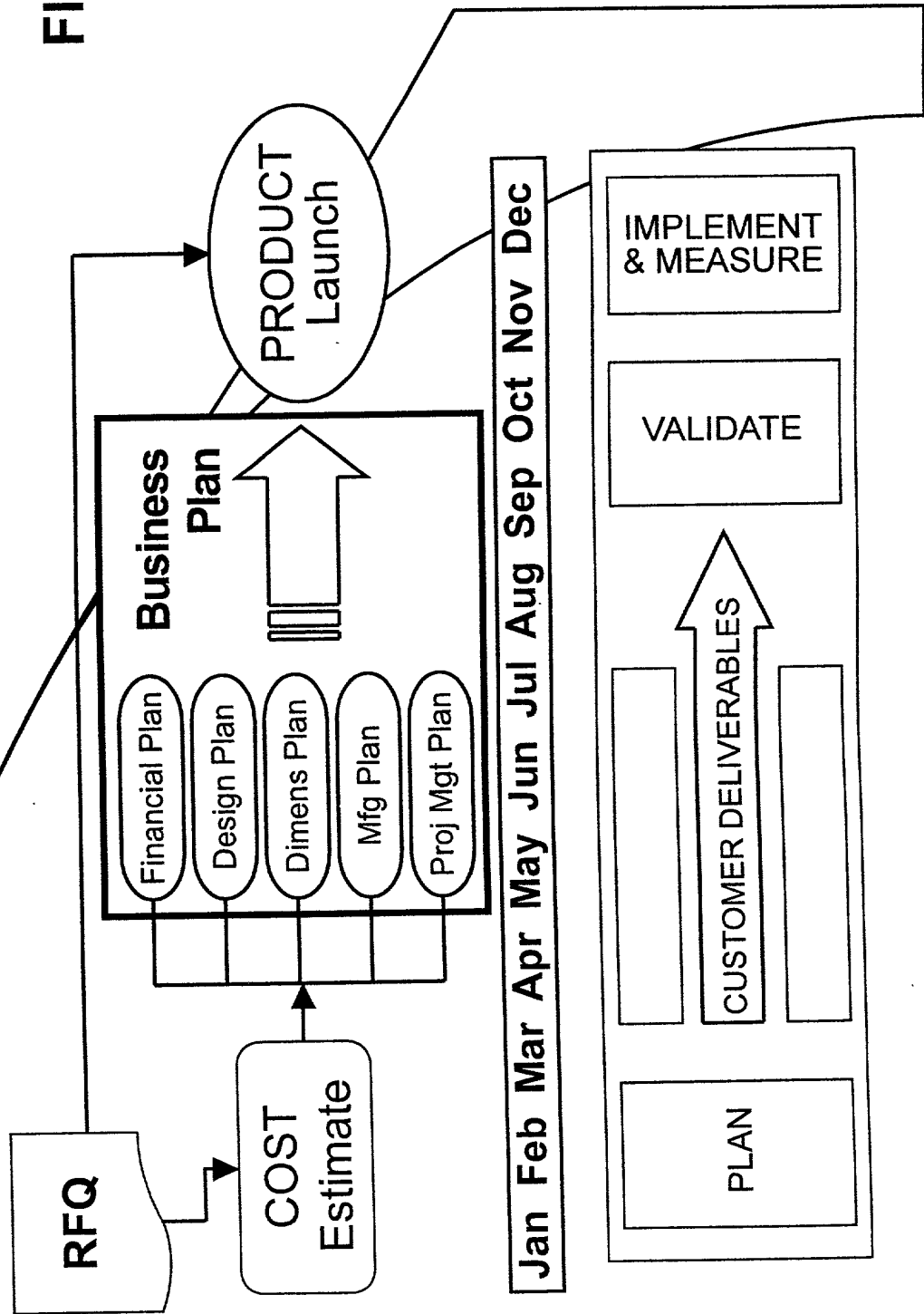
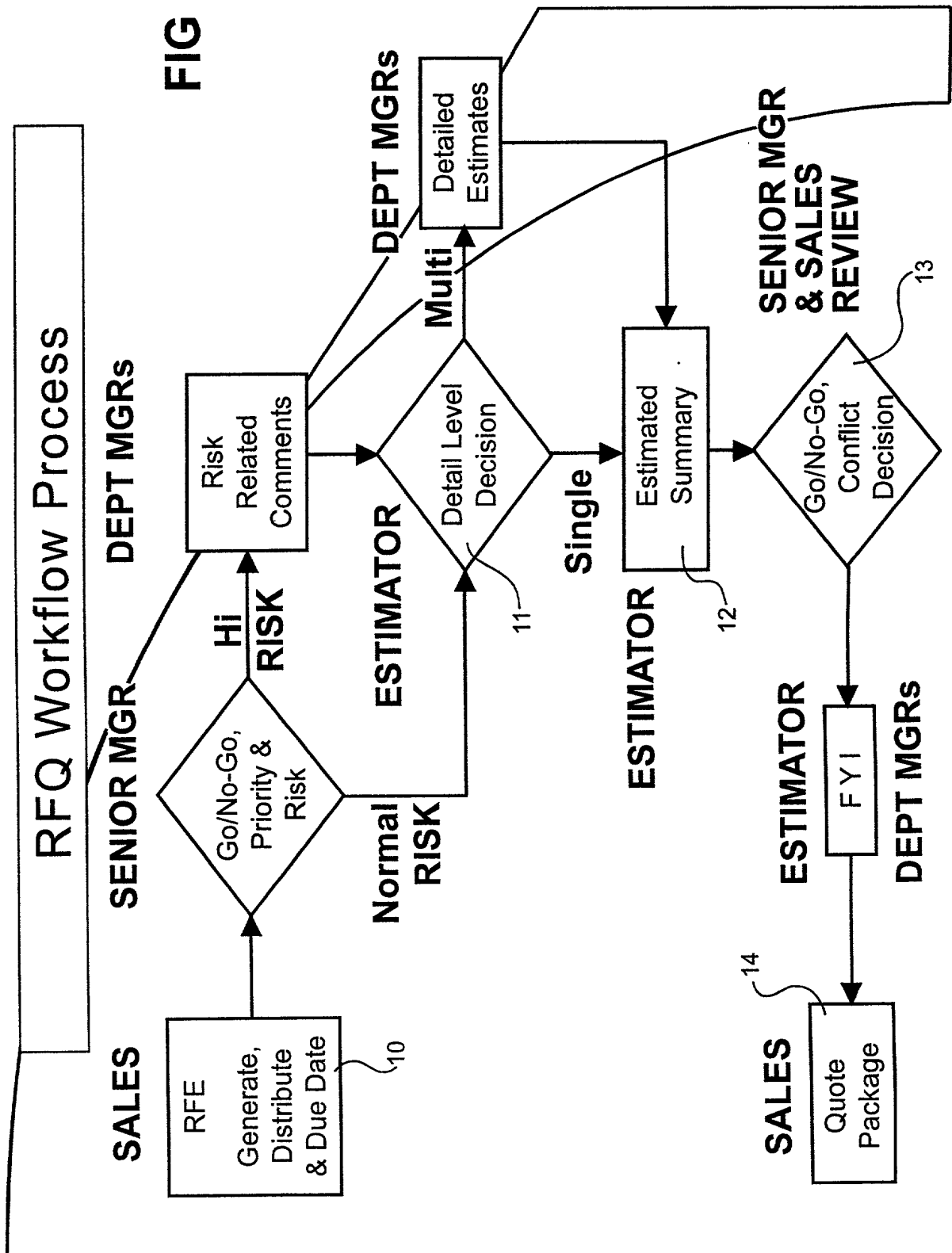


FIG - 2



My Work Queue

Item	Status
Drafts	<input checked="" type="checkbox"/>
Sent	<input type="checkbox"/>
FY Approval	<input type="checkbox"/>
FY Comment	<input type="checkbox"/>
FY Estimate	<input type="checkbox"/>
FY Information	<input type="checkbox"/>
FY Revision	<input type="checkbox"/>
FY Pricing	<input type="checkbox"/>
FY Quote	<input type="checkbox"/>
Projects	<input type="checkbox"/>
Reminders	<input type="checkbox"/>
Alerts	<input type="checkbox"/>
Recycle Bin	<input type="checkbox"/>
Status	<input type="checkbox"/>
Follow-up	<input type="checkbox"/>
Administration	<input type="checkbox"/>
Workflow History	<input type="checkbox"/>

FIG - 4
















My Work Queue RFE Drafts Sent FY Approval FY Comment FY Estimate FY Information FY Revision FY Pricing FY Quote Projects Reminders Alerts Recycle Bin Status Follow-up Administration Workflow History		<h2>Request for Estimate</h2> <h3>00.1.1. General Information</h3> <table><tr><td>Date Quote Due Customer:</td><td><input type="text" value="8/2/2001"/></td><td>Date Created:</td><td><input type="text" value="7/19/2001 2:15 PM"/></td></tr><tr><td>Salesperson:</td><td><input type="text" value="sales"/></td><td>RFE Originator:</td><td><input type="text" value="sales"/></td></tr><tr><td>RFE #</td><td colspan="3"><input type="text"/></td></tr><tr><td>RFE Title:</td><td colspan="3"><input type="text"/></td></tr></table> <p><input checked="" type="radio"/> Bottom-up Quote <input type="radio"/> Cost to Change</p> <h3>00.1.2. Customer Information</h3> <table><tr><td>Customer</td><td><input type="text"/></td></tr><tr><td>Title</td><td><input type="text"/></td></tr><tr><td>Name</td><td><input type="text"/></td></tr><tr><td>Phone</td><td><input type="text"/></td></tr><tr><td>Buyer</td><td><input type="text"/></td></tr><tr><td><input type="text"/></td><td><input type="text"/></td></tr><tr><td><input type="text"/></td><td><input type="text"/></td></tr></table> <h3>00.1.3. Product Information</h3> <table><tr><td>Part Name:</td><td><input type="text"/></td></tr><tr><td>Customer Part #:</td><td><input type="text"/></td></tr><tr><td>Internal Part #:</td><td><input type="text"/></td></tr><tr><td>Product Description:</td><td><input type="text"/></td></tr></table> <table><tr><td>Product Design:</td><td><input checked="" type="radio"/> NEW <input type="radio"/> MODIFIED <input type="radio"/> CARRYOVER</td></tr><tr><td>Model Year</td><td><input type="text"/></td></tr><tr><td>Vehicle Model</td><td><input type="text"/></td></tr></table>		Date Quote Due Customer:	<input type="text" value="8/2/2001"/>	Date Created:	<input type="text" value="7/19/2001 2:15 PM"/>	Salesperson:	<input type="text" value="sales"/>	RFE Originator:	<input type="text" value="sales"/>	RFE #	<input type="text"/>			RFE Title:	<input type="text"/>			Customer	<input type="text"/>	Title	<input type="text"/>	Name	<input type="text"/>	Phone	<input type="text"/>	Buyer	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	Part Name:	<input type="text"/>	Customer Part #:	<input type="text"/>	Internal Part #:	<input type="text"/>	Product Description:	<input type="text"/>	Product Design:	<input checked="" type="radio"/> NEW <input type="radio"/> MODIFIED <input type="radio"/> CARRYOVER	Model Year	<input type="text"/>	Vehicle Model	<input type="text"/>
Date Quote Due Customer:	<input type="text" value="8/2/2001"/>	Date Created:	<input type="text" value="7/19/2001 2:15 PM"/>																																												
Salesperson:	<input type="text" value="sales"/>	RFE Originator:	<input type="text" value="sales"/>																																												
RFE #	<input type="text"/>																																														
RFE Title:	<input type="text"/>																																														
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Phone	<input type="text"/>																																														
Buyer	<input type="text"/>																																														
<input type="text"/>	<input type="text"/>																																														
<input type="text"/>	<input type="text"/>																																														
Part Name:	<input type="text"/>																																														
Customer Part #:	<input type="text"/>																																														
Internal Part #:	<input type="text"/>																																														
Product Description:	<input type="text"/>																																														
Product Design:	<input checked="" type="radio"/> NEW <input type="radio"/> MODIFIED <input type="radio"/> CARRYOVER																																														
Model Year	<input type="text"/>																																														
Vehicle Model	<input type="text"/>																																														

After filling up this form
Originator Can Save this RFQ
as Draft or Send to a manager
for his decision on RFQ.

FIG - 5

[illegible]

FIG - 6

 My Work Queue		Request for Estimate	
 RFE		00.1.1. General Information	
 Drafts	 Sent	Date Quote Due Customer: 7/9/2001	Date Created: 6/22/2001 5:41 PM
 FY Approval	 FY Comment	Salesperson: sales	RFE Originator: sales
 FY Estimate	 FY Information	RFE # 23541Q	
 FY Revision	 FY Pricing	RFE Title: Mercedes headlamp wiper for M-class	
 FY Quote	 Alerts	<input checked="" type="radio"/> Bottom-up Quote <input type="radio"/> Cost to Change	
 Recycle Bin	 Status	00.1.2. Customer Information	
 Follow-up			
		Customer Mercedes	
		Title Name	Phone
		Buyer Jaques Clausen	654.235.3589
		Project Manager Thomas Kinder	365-564-5866 x25
		00.1.3. Product Information	
		Part Name: Headlamp Wiper	
		Customer Part #: 24651	

Manager can View the RFE details here.

Click on
'A' to
make
decision.
It opens
current
window

FIG - 8

<div style="border: 1px solid black; padding: 2px;"> My Work Queue RFE Drafts Sent FY Approval FY Comment FY Estimate FY Information FY Revision FY Pricing FY Quote Projects Reminders Alerts Recycle Bin <input type="checkbox"/> Status <input type="checkbox"/> Follow-up <input type="checkbox"/> Administration Workflow History </div>	<div style="border: 1px solid black; padding: 2px;"> Priority 1 </div>	Response Due Date: 2001-07-20 ▼ or Business Days 1	<div style="border: 1px solid black; padding: 5px;"> Comments: Good Opportunity </div>
<div style="border: 1px solid black; padding: 5px; display: inline-block;"> Select Team Members if the RFE is approved </div>			
<div style="border: 1px solid black; padding: 5px;"> Estimator Program Manager Timing / Scheduling Manager Business Strategist Human Resource Manager </div>		<div style="border: 1px solid black; padding: 5px;"> estimates ▼ program ▼ timing ▼ strategy ▼ transfer ▼ </div>	
<div style="border: 1px solid black; padding: 5px;"> Business / Financial Manager Product Engineer Manufacturing Engineer Supplier Relations </div>		<div style="border: 1px solid black; padding: 5px;"> finance ▼ product ▼ manufacturing ▼ supplier ▼ </div>	

SAVE
SEND
CANCEL

Request for Estimate *(saved disabled)*

00.1.1. General Information

Date Quote Due Customer:	8/2/2001 ▼	Date Created:	7/19/2001 3:28 PM
Salesperson:	sales ▼	RFE Originator:	sales
RFE #	23541Q		
RFE Title:	Mercedes headlamp wiper for M-class		

☒ Bottom-up Quote ☐ Cost to Change

00.1.2. Customer Information

Customer	Mercedes
Title	Name Phone

FIG. 9

<input type="checkbox"/>	<input checked="" type="radio"/> S	RFE #	RFE Title	Action Due Date	Sender	C
<input checked="" type="radio"/>	E 0 1	RFQ3256	Honda Front Wiper Assembly for 2007 MK Sport Utility	Fri, Jul 20, 2001	manager, Manager	C
<input type="radio"/>	E 0 2	2351Q	Mercedes headlamp wiper for 2008 M-class	Fri, Jul 20, 2001	manager, Manager	C

If the RFE is approved by the Manager, next request goes to Estimator for estimation. Logon as Estimator to see the request.

'FY Estimate' lists all the requests for Estimate. Click on blue ball to make a selection.

FIG - 10

Estimate Program Costs - Level 1

0.1 Cost Estimate

☒ 0.1.1 Worksheet

0.2 Estimate Admin

☐ 0.2.1 Work Center List

☐ 0.2.2 Material Stock List

COST Estimating Worksheet

RFE # R3

UPDATE

Part No.	Part Name	Molds & Dies	Racks	Fixtures	Secondaries
3233222	Rear Window Wiper	2,333	6,558	30,000	0
3321	Arm	0	0	0	0
2256	Blade	0	0	0	0
33654	Washer hose	0	0	0	0
4545	Hose Clamp	0	0	0	0
32564	Hose Insert	0	0	0	0

Program Mgmt

\$25,000.00

Product Design

\$35,000

Dimensional Engrg

\$5,000.00

MFG Tooling Design

\$20,000.00

MFG Process Design

\$10,000.00

Engineering Costs

BOM Tooling and Piece Cost

Engineering Cost Drill Down - Level 2

FIG - 11

0.1 Cost Estimate

☒ 0.1.1 Worksheet
 ☐ 0.2 Estimate Admin
 ☐ 0.2.1 Work Center List
 ☐ 0.2.2 Material Stock List

Product Design Engineering

R3

UPDATE

SAVE

REVERT

NUMBER OF ROWS TO ADD:

ADD ROWS

	Material	Hours	Material	Labor	Burden	Task
<input type="checkbox"/>	\$	40	\$65.00	\$2,600	\$	Collect design data
<input type="checkbox"/>	\$	40	\$75.00	\$3,000	\$	Get requirements
<input type="checkbox"/>	\$	200	\$75.00	\$15,000	\$	Create cad models
<input type="checkbox"/>	\$3,000	60	\$65.00	\$3,900	\$	Create Prototypes
<input type="checkbox"/>	\$5,000	50	\$50.00	\$2,500	\$	FEA analysis
	\$8,000			\$27,000	\$0	
Grand TOTAL= \$ 35,000						
Product Design Cost						

Material, Labor, Burden

FIG - 12

Piece Cost Drill Down - Level 2

0.1 Cost Estimate
 0.1.1 Worksheet
 0.2 Estimate Admin

SIMILAR TO: ---N/A---
 Rev.Level: ---N/A---
 ESTIMATE: ---N/A---

Cost Type: PIE

Operation Description

lbs kgs

Burdened Workcenter

Material

Process Description	Workcenter	Cost per Hour	Posted	Process Minutes	Process Cost
G <input type="checkbox"/> cut raw material to size	M322 : ACE CUT-OFF	63.75	05/02/01	5	5
G <input type="checkbox"/> machine to print	M278 : CincinnatiMilacron MC4000	25.00	05/02/01	10	4
				9.48	5

CostDetails, if any, are specified above.

Sheet metal | .030" thk x 48" x 96" | qty=1

UnitCost: \$ 2.50

StockUnitCost: \$ 2.50

StockUnitsUsed: 1

UnitsUsed: 1

EST.COST 9.48

TOTAL ESTIMATE: 12.88

Piece Cost

FIG - 13

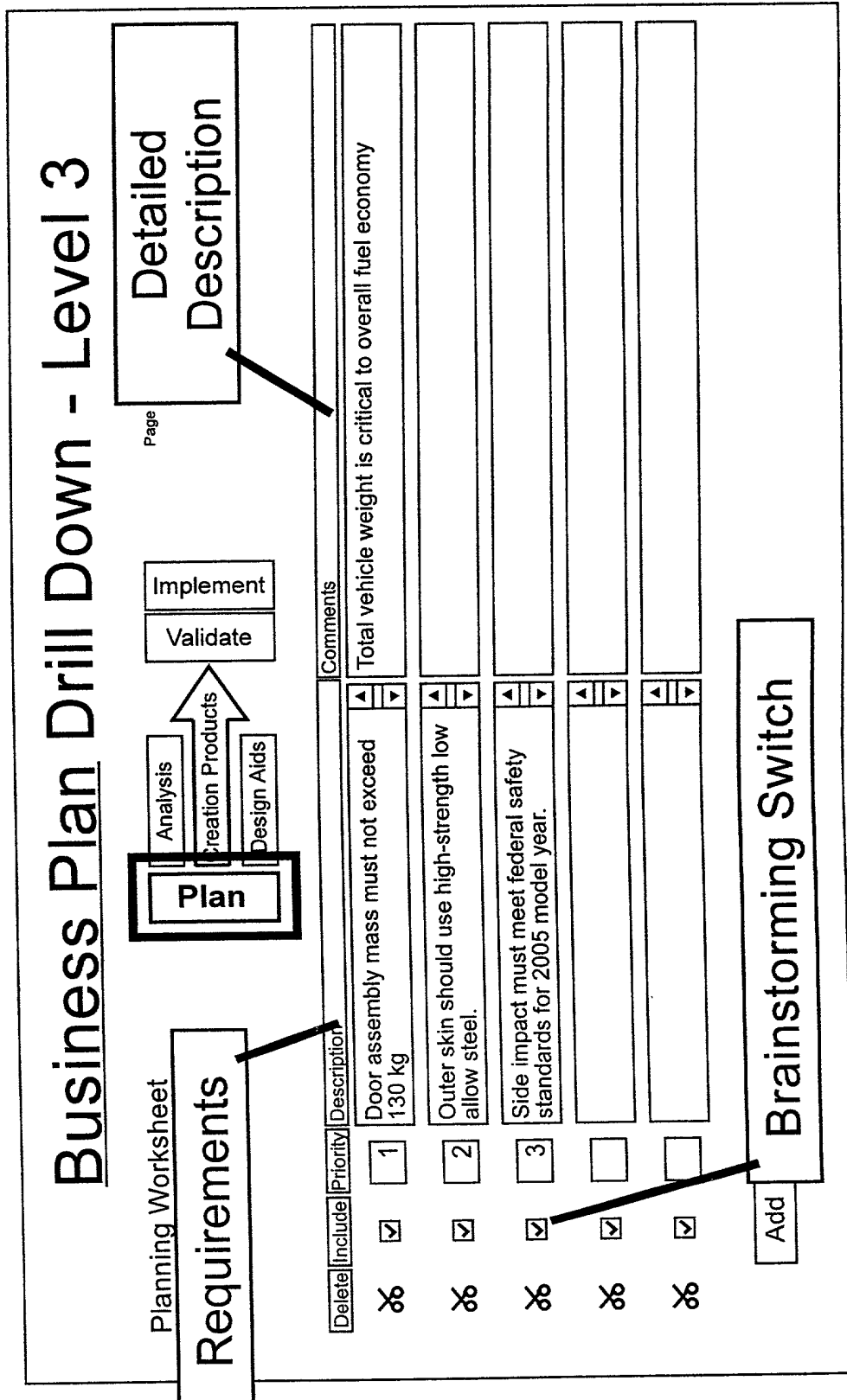


FIG - 14

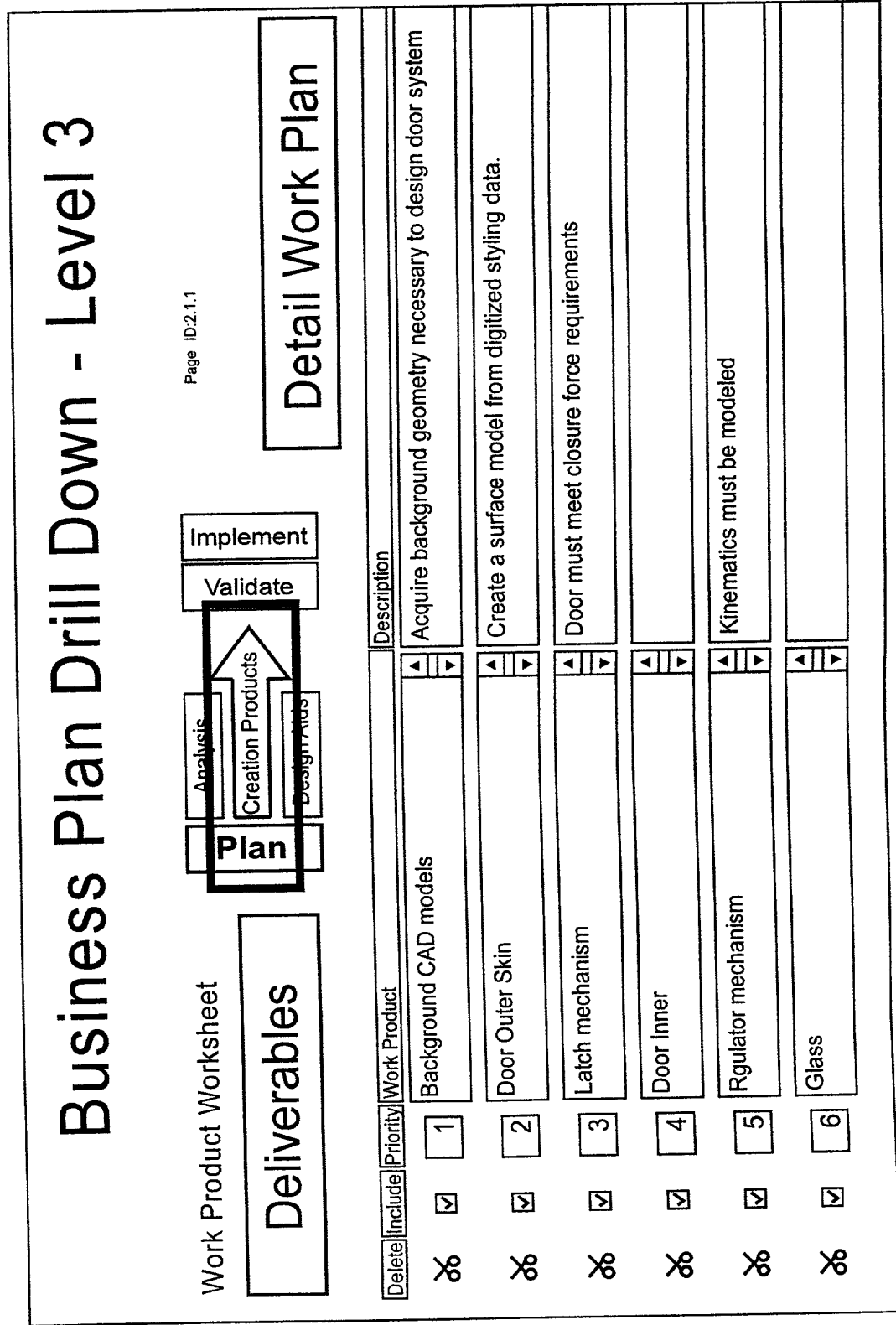
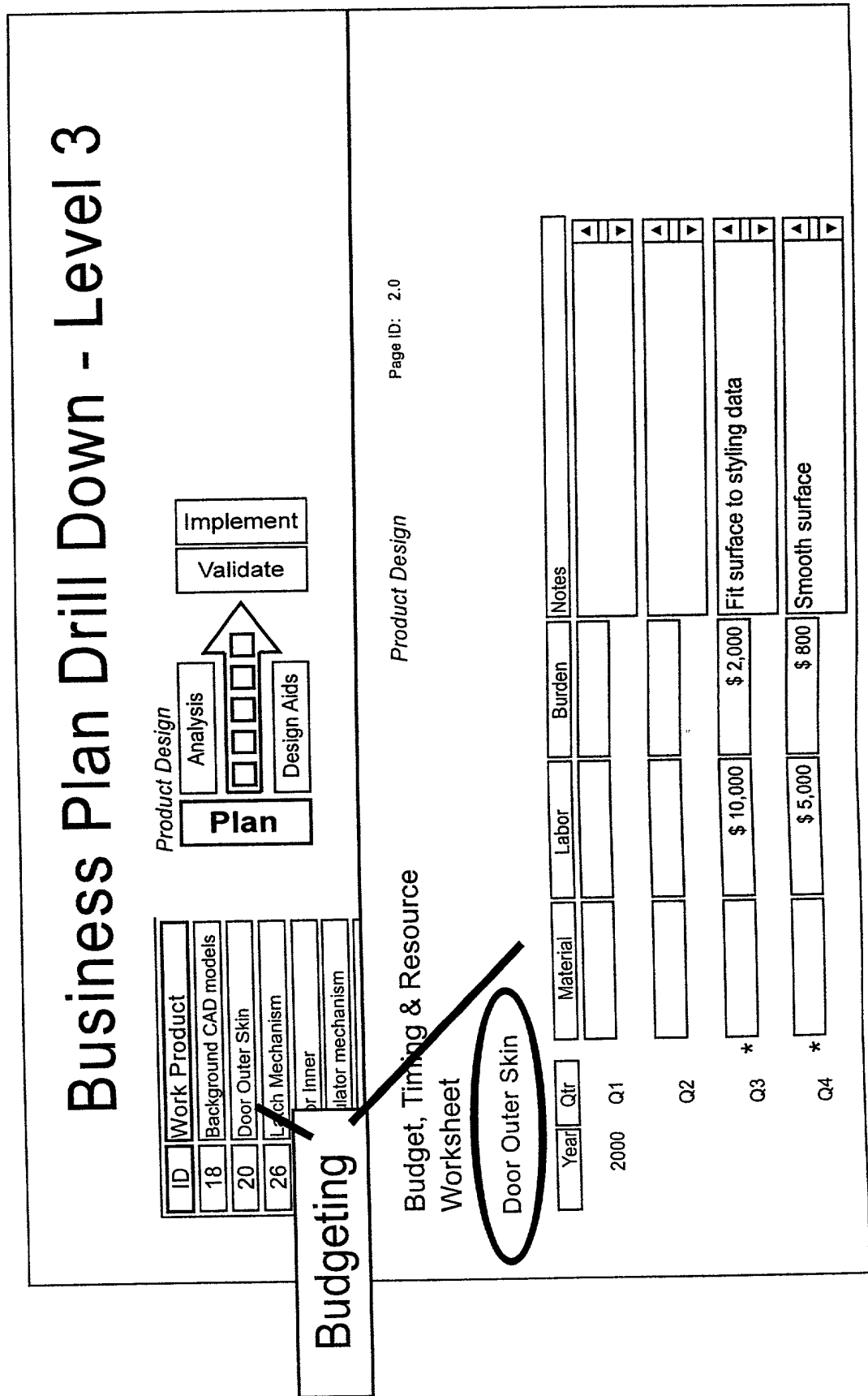


FIG - 15



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FIG - 16

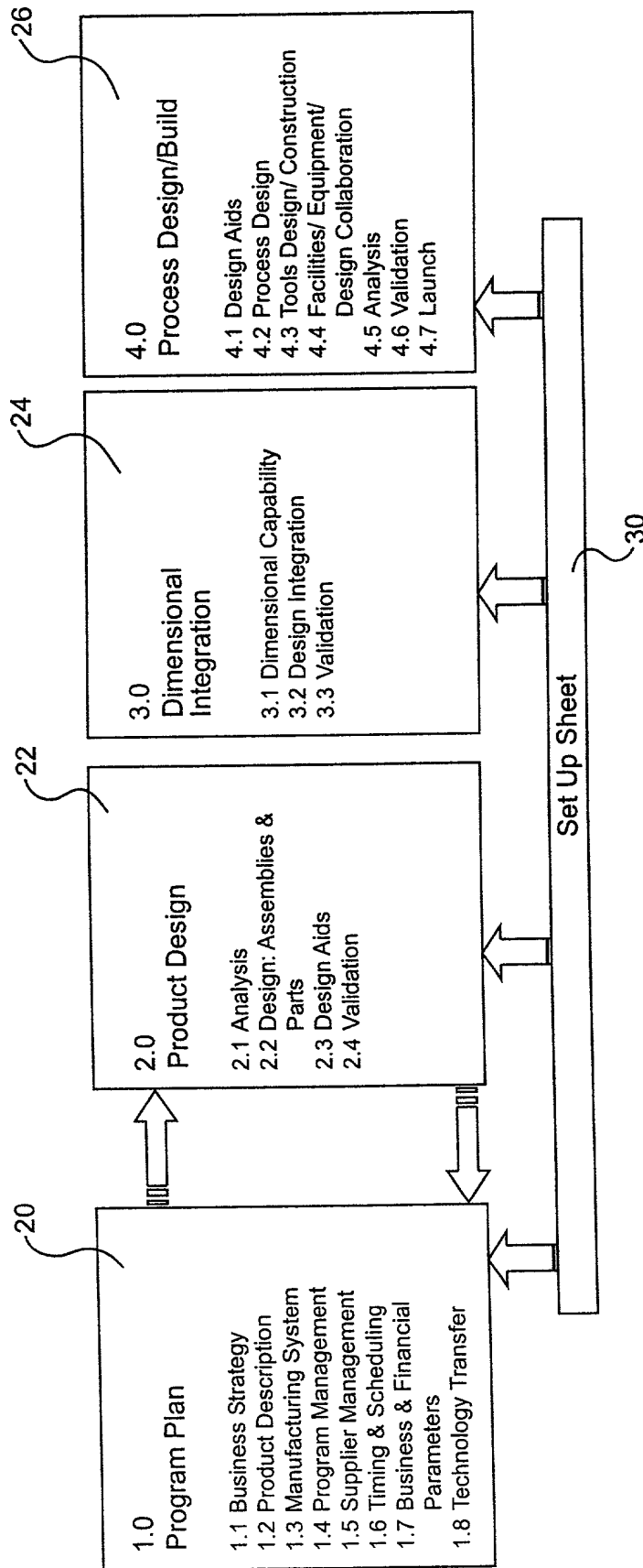


FIG - 17

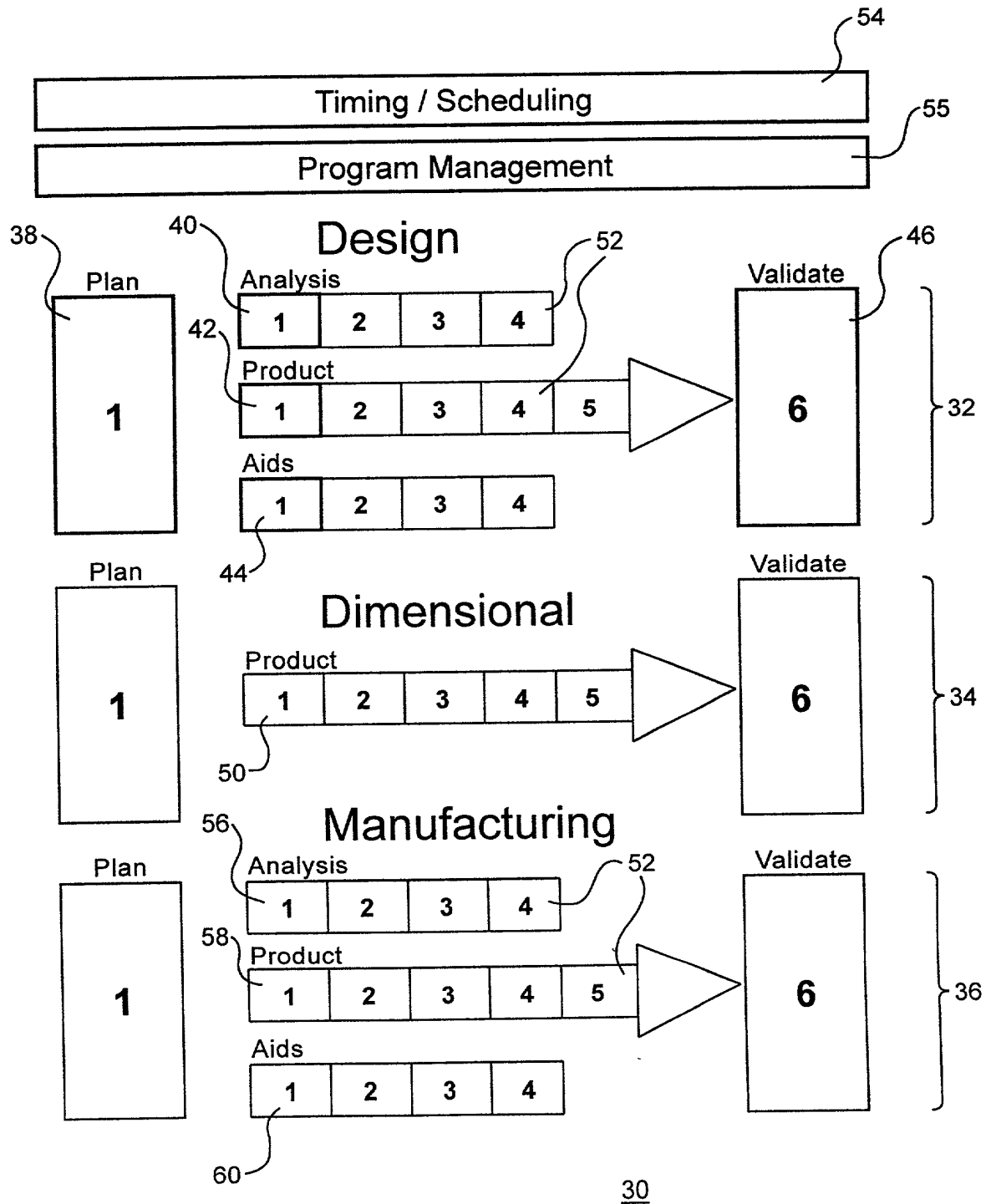
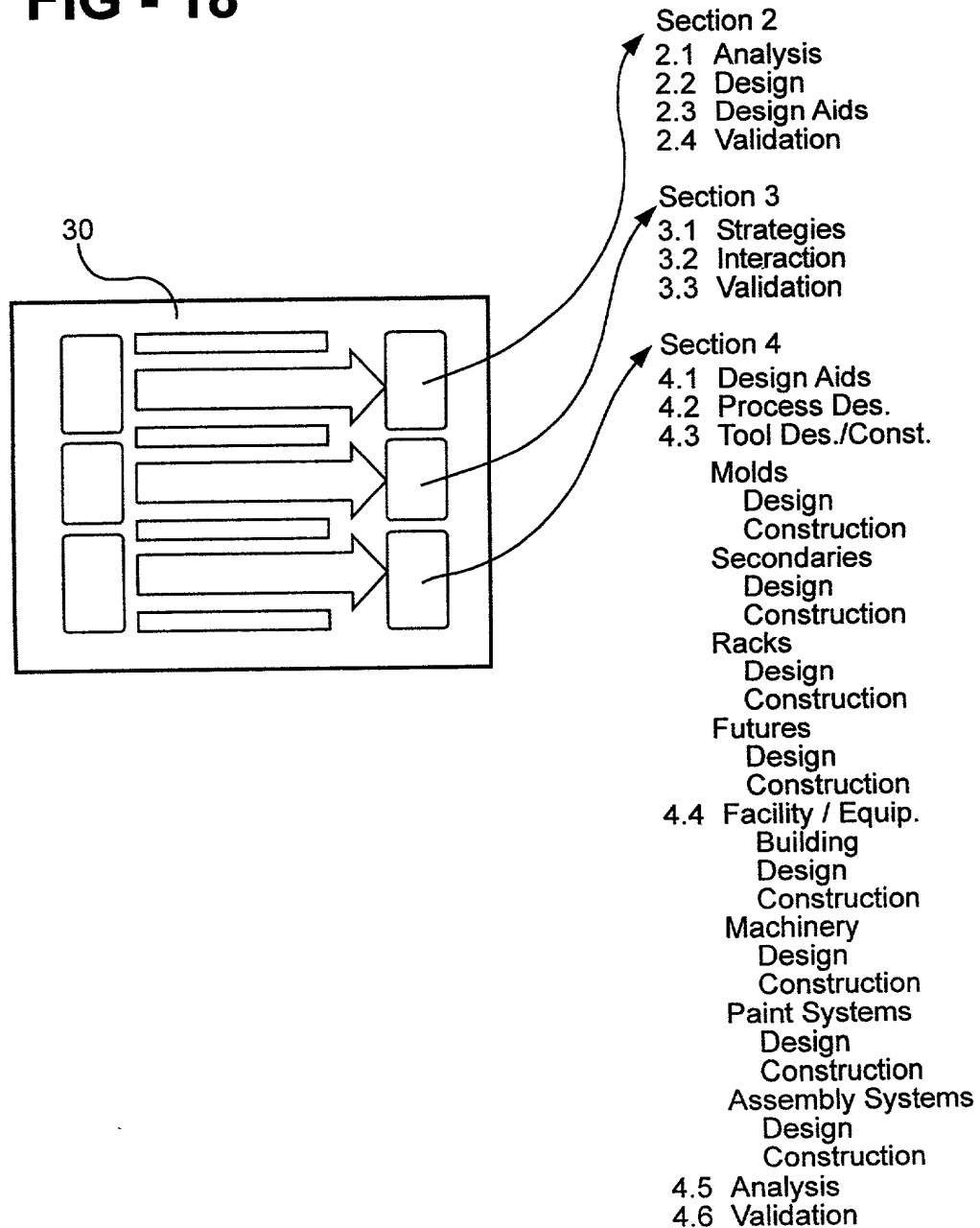


FIG - 18





20/40

Design Product

FIG - 20

Major Review	Work Products	Start	Finish	Duration	Man-hours	Skill Level	Additional Product Description (optional)
06/01/00							

* Enter Totals for All Products Listed Above

	2000				2001				2002				2003			
	01	02	03	04	01	02	03	04	01	02	03	04	01	02	03	04
Material																
Labor																
Burden																

SAVE

CANCEL

42

Program Management

FIG - 22

	2000				2001				2002				2003			
	01	02	03	04	01	02	03	04	01	02	03	04	01	02	03	04
Material																
Labor																
Burden																

SAVE

CANCEL

Timing / Scheduling		F
Customer Events	_____	Date _____
	_____	_____
	_____	_____
	_____	_____
	_____	Production Start _____

Major Reviews (arrow chart review dates)		
1	_____	Program Start 01/01/00 _____
1	_____	Products, Aids, A _____ 06/01/00 _____
2	_____	Products, Aids, A _____
3	_____	Products, Aids, A _____
4	_____	Products, Aids, A _____
5	_____	Product - 5 _____
6	_____	Validation _____
7	_____	Launch _____

CANCEL

SAVE

22/40

Design Plan

Plan

FIG - 23

	2000				2001				2002				2003			
	01	02	03	04	01	02	03	04	01	02	03	04	01	02	03	04
Material																
Labor																
Burden																

SAVE

CANCEL

Design Analysis

FIG - 24

Major Review	Work Products	Start	Finish	Duration	Man-hours	Skill Level	Additional Product Description (optional)
06/01/00							

* Enter Totals for All Products Listed Above

	2000				2001				2002				2003			
	01	02	03	04	01	02	03	04	01	02	03	04	01	02	03	04
Material																
Labor																
Burden																

SAVE

CANCEL

Design Products

Major Review	Work Products	Start	Finish	Duration	Man-hours	Skill Level	Additional Product Description (optional)
06/01/00							

FIG - 25

* Enter Totals for All Products Listed Above

2000				2001				2002				2003			
01	02	03	04	01	02	03	04	01	02	03	04	01	02	03	04
Material															
Labor															
Burden															

SAVE

CANCEL

Validate

Major Review	Work Products	Start	Finish	Duration	Man-hours	Skill Level	Additional Product Description (optional)
01/00/00							

FIG - 26

* Enter Totals for All Products Listed Above

2000				2001				2002				2003			
01	02	03	04	01	02	03	04	01	02	03	04	01	02	03	04
Material															
Labor															
Burden															

SAVE

CANCEL

[illegible]

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FIG - 29

20520" 5486660

File Edit View

G:\DataBases

Cost Summary
Business Plan

Links

PDS
TECHNOLOGY

SSR Truck
BOM | SBRS | < no selection >

Timing | Responsibility | Site Map | Home

setup | plan | product | dimensional | mfg

Level-1 Setup

Level-2 Setup

1 Program Management

2 Product Design

3 Dimensional Design

4 Mfg. Design/Build

5 Putting It Together

6 Summary Reports

7 Total Program Summary

Total Budget

Total Scheduling

Total Resources

PRODUCT DESIGN

Plan

Core Products

Analysis + Design Aids

Validation

TOTALS

Grand Total

2000

2001

2002

2003

\$ 12,000

\$ 12,000

\$ 0

\$ 0

\$ 0

\$ 54,800

\$ 21,300

\$ 33,500

\$ 0

\$ 0

\$ 17,600

\$ 3,300

\$ 0

\$ 10,600

\$ 3,700

\$ 12,600

\$ 0

\$ 0

\$ 0

\$ 12,600

\$ 97,000

\$ 36,600

\$ 33,500

\$ 10,600

\$ 16,300

DIMENSIONAL
MANAGEMENT

Plan

Core Products

Validation

TOTALS

Grand Total

2000

2001

2002

2003

\$ 67,000

\$ 0

\$ 67,000

\$ 0

\$ 0

\$ 1,200

\$ 300

\$ 300

\$ 80

\$ 0

\$ 6,000

\$ 2,000

\$ 1,000

\$ 3,000

\$ 0

\$ 74,200

\$ 2,300

\$ 68,300

\$ 3,600

\$ 0

MANUFACTURING
PROCESS

Plan

Core Products

Analysis + Design Aids

Validation

TOTALS

Grand Total

2000

2001

2002

2003

\$ 11,300

\$ 5,000

\$ 0

\$ 0

\$ 6,300

\$ 3,190

\$ 3,190

\$ 0

\$ 0

\$ 0

\$ 0

\$ 0

\$ 0

\$ 0

\$ 0

\$ 0

\$ 0

\$ 0

\$ 0

\$ 0

\$ 14,490

\$ 8,190

\$ 0

\$ 0

\$ 6,300

Unknown Zone (Mixed)

FIG - 30

Timing - Program Management
Business Plan

Address: http://63.242.140.100

File Edit View

Back Forward Stop

Address: http://63

Plan

Analysis

Design Aids

Validate

Implement

PROJECTS

ANALYSIS

TIME ZONES

CREATION_PRODUCTS

DESIGN_AID

MAJOR_MILESTONES

PROJECT Software Configuration & Integration

CREATION PRODUCT: n/a

ANALYSIS / DESIGN AID: n/a

YOUR ACCESS: READ,WRITE

ORG RESPONSIBLE: Project Management

USER:

ORG:

ROLE:

☐ Plan

☐ Creation Products

☐ Validation

☐ Implementation

☐ Reports

STARTS: 03/01/2001

ENDS: 03/01/2001

Edit

PROJECT TIMING

UNITS: WEEKS

MILESTONE TYPE	DESCRIPTION	DATE
Review Meeting	Review Functional Specs	3/7/2001
Customer Meeting	Demo Construction Site	3/17/2001

Save

View Scale: 5

Include Milestones

Time Zone Name	Reference Duration	Scheduled Duration	START
Plan / Overview		1	3/1/2001
Creation Product 1			3/1/2001
Paper Model of Process Examples		6	3/2/2001
Creation Product 2			3/7/2001
Hardware/ Software Configuration Spec		9	3/6/2001
Creation Product 3			3/14/2001
Construction Site (Working Model)		8	3/14/2001
Creation Product 4			3/19/2001
Software Documentation 1 Documents 2. Working Model		5	3/19/2001
Creation Product 5		6	3/22/2001
Production Software			3/27/2001
Validation		3	3/27/2001
Implementation		2	3/30/2001

Done

Start

Internet

8:54 AM

FIG - 31A


1.2.1 Background


- System Administration
- Summary Reports
- Opportunity Profiles
- 0 Setup Sheet
- 1 Program Plan
- 1 Business Strategy
- 2 Product Description
- 1 Background Information
- 2 Knowns
- 3 Questions
- 4 Preliminary Plan
- 5 Resolution Required
- 6 Final Plan
- 7 Required Documents
- 8 Program Issues
- 9 Miscellaneous Documents
- 3 Manufacturing Systems
- 4 Program Management
- 5 Supplier Management
- 6 Timing / Scheduling
- 7 Business / Financial
- 2 Product Design
- 3 Dimensional
- 4 Process Design


This should be a direct download from 2 areas:

Opportunity Profile

- 1. Create
 - 1. Overview Data
 - Product Opportunity (Scope/Description)
- 4. Program Definition Summary
 - Product Description

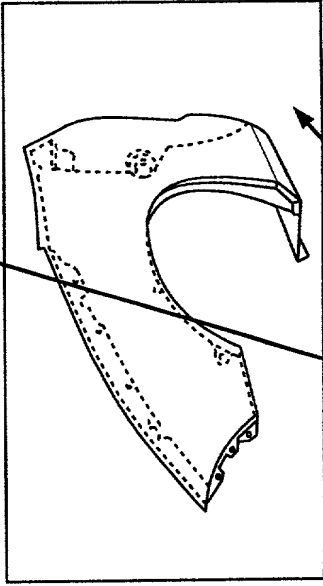
EDIT 

ADD NEW 

DELETE 

Product Opportunity:
 The product to be designed is the left and right fenders for the Chrysler Q Van. The material will be a non-metallic plastic or composite for weight savings and lower cost production tooling with respect to a typical steel fender. The approximate volume is 80,000 vehicles per year for the 2005 - 2012 time period.

Product Description:
 The product to be designed and produced is a vehicle front fenders. It's purpose is to cover the structure of the front of the vehicle, shield the front of the vehicle from the outside elements, provide an aesthetically pleasing appearance, and provide protection to the components under the fender.



With the user changing or adding more info

FIG - 31B

1.2.2 Knowns

- ☐ System Administration
- ☐ Summary Reports
- ☐ Opportunity Profiles
- ☐ 0 Setup Sheet
- ☐ 1 Program Plan
- ☐ 1 Business Strategy
- ☐ 2 Product Description
- ☐ 1 Background Information
- ☐ 2 Knowns
- ☐ 3 Questions
- ☐ 4 Preliminary Plan
- ☐ 5 Resolution Required
- ☐ 6 Final Plan
- ☐ 7 Required Documents
- ☐ 8 Program Issues
- ☐ 9 Miscellaneous Documents
- ☐ 3 Manufacturing Systems
- ☐ 4 Program Management
- ☐ 5 Supplier Management
- ☐ 6 Timing / Scheduling
- ☐ 7 Business / Financial
- ☐ 2 Product Design
- ☐ 3 Dimensional
- ☐ 4 Process Design

CATEGORY ▼	Enter the knowns. A known is an item that has not been established as a Given or a Requirement
Business	100000 Vehicles/year with 20% service margin
Business	To be manufactured at the Grand Rapids molding facility
Business	Non-sequenced parts
Manufacturing	1000 ton press scheduled
Manufacturing	Simple mold - no lifters
Manufacturing	To be delivered unpainted to customer
Manufacturing	No cooling fixtures budgeted for parts
Product	General profile tolerance of +/- 1.0 mm
Product	Material SMC or flex SMC
Product	Must meet dent resistance of 500 mj
Product	One-piece construction preferred, no bonded parts

☐ ☐ ☐ ☐ ☒ ☐ ☐ ☐ ☐ ☐

EDIT

ADD NEW

DELETE

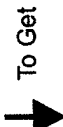
FIG - 31C

1.2.3.2 Questions

- ☐ System Administration
- ☐ Summary Reports
- ☐ Opportunity Profiles
- ☐ 0 Setup Sheet
- ☐ 1 Program Plan
- ☐ 1 Business Strategy
- ☐ 2 Product Description
- ☐ 1 Background Information
- ☐ 2 Knowns
- ☐ 3 Questions
- ☐ 4 Preliminary Plan
- ☐ 5 Resolution Required
- ☐ 6 Final Plan
- ☐ 7 Required Documents
- ☐ 8 Program Issues
- ☐ 9 Miscellaneous Documents
- ☐ 3 Manufacturing Systems
- ☐ 4 Program Management
- ☐ 5 Supplier Management
- ☐ 6 Timing / Scheduling
- ☐ 7 Business / Financial
- ☐ 2 Product Design
- ☐ 3 Dimensional
- ☐ 4 Process Design

- ☐ BUSINESS QUESTIONS
- ☐ PRODUCT QUESTIONS
- ☐ DIMENSIONAL QUESTIONS
- ☒ MANUFACTURING QUESTIONS
- ☐ ALL QUESTIONS

Point and Click



To Get

- EDIT
- ADD NEW
- DELETE
- ANSWER

1.2.3 Questions This section is for persons outside Product Description to query Product Description about information required to complete their section of the program plan. Enter questions that affect your relevant area.

1) Id: Q5: One of the stated verbal goals is not to use multiple parts but rather one-piece construction. How do you plan to do this with the die-locked conditions found on the part? I'm worried you will have to violate our manufacturing knowns of no lifters in the molds.

Question Submitted by: Bob Dyer (manufacturing) 01/18/2000

Answer: Bob: There are 2 materials choices, RIM or SMC. Of SMC, there are 2 types, Flex and non-Flex. Depending on the amount of die lock, and ability to tip the part in the mold, there are material options to allow the part to be peeled off the mold. Of course, if needed, I may have to violate one of my knowns, no multiple parts. We can always add a piece cost at the expense of lifter cost and maintenance by bonding the die-locked parts to the fender. When we get the final styling direction, we will know the optimum way to go.

Answer Submitted by: Lisa Jennings (Product Design) 1/20/2000

Add New Question : [Add Question](#)

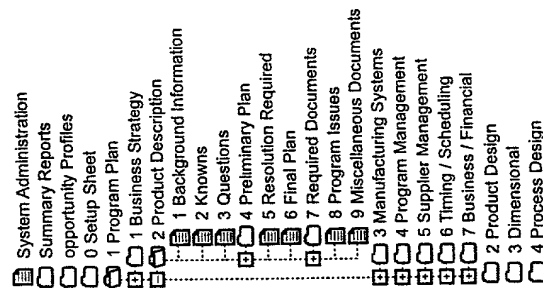
Edit Question-? [Select Id:](#)

The add new question button will appear for everyone else.

The answer button will only appear for the person who owns the product section.

FIG - 31D

1.2.4 Preliminary Plan



Preliminary Plan:

The purpose of the preliminary plan is to provide basic information about the product that will be used to determine the overall business viability of the project. After key milestones, the preliminary plan becomes the final plan and portions of the plan are copied into section 2.0, product design. The preliminary plan consists of the following:

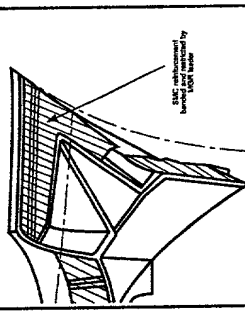
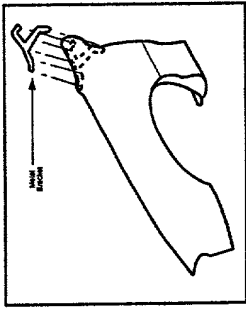
- 1.2.4.1- Product Concepts - word descriptions with sketches, pictures or links to other web sites that help describe the basics of the product
- 1.2.4.2- Product Content - description of the overall product variations or options that need to be manufactured
- 1.2.4.3- Bill of Material - The parts list with the hierarchy of the assembly structure for the product.
- 1.2.4.4- Alternate Strategies - Specific themes or descriptions of key initiatives within the product design that may effect the development of the product design. Examples may include material strategies, service strategies, or shipping strategies.
- 1.2.4.5 Product performance Criteria - Word descriptions with or without graphs or sketches that describe the requirements of the product.

FIG - 31E

1.2.4.1 Product Concepts

- ☐ System Administration
- ☐ Summary Reports
- ☐ Opportunity Profiles
- ☐ 0 Setup Sheet
- ☐ 1 Program Plan
- ☐ 1 Business Strategy
- ☐ 2 Product Description
- ☐ 1 Background Information
- ☐ 2 Knowns
- ☐ 3 Questions
- ☐ 4 Preliminary Plan
- ☐ 5 Resolution Required
- ☐ 6 Final Plan
- ☐ 7 Required Documents
- ☐ 8 Program Issues
- ☐ 9 Miscellaneous Documents
- ☐ 3 Manufacturing Systems
- ☐ 4 Program Management
- ☐ 5 Supplier Management
- ☐ 6 Timing / Scheduling
- ☐ 7 Business / Financial
- ☐ 2 Product Design
- ☐ 3 Dimensional
- ☐ 4 Process Design

EDIT  ADD NEW  DELETE 

TITLE	IMAGE	DESCRIPTION
SMC GUSSET FOR REAR UPPER CORNER STIFFNESS		NO ATTACHMENT, ADD STIFFENING GUSSET
METAL GUSSET FOR REAR UPPER CORNER STIFFNESS		ADD METAL BRACKET TO FENDER THAT WILL BECOME ASSEMBLY DATUM

The EDIT, ADD NEW, and DELETE buttons will only appear for the people defined by the responsibility matrix. The radio buttons to the left of the table will choose the row to be modified

- ☐ System Administration
- ☐ Summary Reports
- ☐ Opportunity Profiles
- ☐ 0 Setup Sheet
- ☐ 1 Program Plan
- ☐ 1 Business Strategy
- ☐ 2 Product Description
 - ☐ 1 Background Information
 - ☐ 2 Knowns
 - ☐ 3 Questions
 - ☐ 4 Preliminary Plan
 - ☐ 5 Resolution Required
 - ☐ 6 Final Plan
 - ☐ 7 Required Documents
 - ☐ 8 Program Issues
 - ☐ 9 Miscellaneous Documents
- ☐ 3 Manufacturing Systems
- ☐ 4 Program Management
- ☐ 5 Supplier Management
- ☐ 6 Timing / Scheduling
- ☐ 7 Business / Financial
- ☐ 2 Product Design
- ☐ 3 Dimensional
- ☐ 4 Process Design

1.2.4.2 Product Content

☐ EDIT ☐ ADD NEW ☐ DELETE

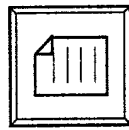
TITLE	DESCRIPTION
FENDER MOLDING OPTIONS	<ul style="list-style-type: none"> Two levels of trim will be used on the fenders. One with a spear molding and one without. The molding will be a 20-40% option and will match a spear molding on the door and rear quarter.
OPTIONAL COLORS	<ul style="list-style-type: none"> The fenders will be painted at the vehicle assembly plant with 10 optional colors. Some colors will be light and may require a lighter primer to prevent read through.
SURFACE QUALITY TARGETS	<ul style="list-style-type: none"> The outer surface will be class A and require an orange peel level below 20 OPL. The gloss level is expected to match the rest of the vehicle and is set to 100 VGL. There should be no perceptible surface imperfections.
FENDER AIR DUCTING	<ul style="list-style-type: none"> The fenders should have the ability to allow airflow into the brake area for brake cooling. The should be a decorative bezel surrounding the cooling inlet.

FIG - 31F

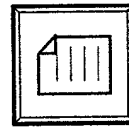
FIG - 31G

1.2.4.3 Bill of Material

- ☐ System Administration
- ☐ Summary Reports
- ☐ Opportunity Profiles
- ☐ 0 Setup Sheet
- ☐ 1 Program Plan
- ☐ 1 Business Strategy
- ☐ 2 Product Description
- ☐ 1 Background Information
- ☐ 2 Knowns
- ☐ 3 Questions
- ☐ 4 Preliminary Plan
- ☐ 5 Resolution Required
- ☐ 6 Final Plan
- ☐ 7 Required Documents
- ☐ 8 Program Issues
- ☐ 9 Miscellaneous Documents
- ☐ 3 Manufacturing Systems
- ☐ 4 Program Management
- ☐ 5 Supplier Management
- ☐ 6 Timing / Scheduling
- ☐ 7 Business / Financial
- ☐ 2 Product Design
- ☐ 3 Dimensional
- ☐ 4 Process Design



CHANGE
BOM
STRUCTURE



ADD BOM
DETAILS

To get
blue area
that can be
changed

To get
blue area
that can be
changed

UPC CODE 5F	FNA CODE 2150	P/N 1E+07	PART DESC. A	FIRST USED 2003	QTY 1	CHARGE NUMBER 15545	ASM STA. 325	ASSY INST. ###	MODEL 5BY6	BUILD # 6382	REL ENGR CODE SD33	ENGR NAME STON	ENG MGR NAME SMITH
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THE PROGRAM LAUNCHED WOULD BE EXCEL FOR EXAMPLE WHERE
ADDITIONAL COLUMNS AND TITLES CAN BE ADDED.

THE ABOVE EXAMPLE IS THE BOM COLUMN TITLES USED BY AN OEM:

FIG - 31H

1.2.4.4 Product Strategies

- ☒ System Administration
- ☒ Summary Reports
- ☒ Opportunity Profiles
- ☒ 0 Setup Sheet
- ☒ 1 Program Plan
- ☒ 1 Business Strategy
- ☒ 2 Product Description
- ☒ 1 Background Information
- ☒ 2 Knowns
- ☒ 3 Questions
- ☒ 4 Preliminary Plan
- ☒ 5 Resolution Required
- ☒ 6 Final Plan
- ☒ 7 Required Documents
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- ☒ 3 Manufacturing Systems
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- ☒ 5 Supplier Management
- ☒ 6 Timing / Scheduling
- ☒ 7 Business / Financial
- ☒ 2 Product Design
- ☒ 3 Dimensional
- ☒ 4 Process Design

EDIT  ADD NEW  DELETE 

TITLE	DESCRIPTION
MATERIAL STRATEGY	There are three candidates for materials for the front fender. They are SMC, Flex SMC, and RIM. The leading candidate is SMC due to it's low cost and high stiffness. If a die lock condition exists, where the part will have to be peeled off a mold, then Flex SMC may be an alternative. I the die lock is more severe, then RIM may be used. The cost and lack of dimensional stability for RIM is not as attractive as SMC or Flex SMC, therefore an alternative may be SMC with the die locked part bonded to the fender to become an assembly. This violates the part strategy of having one part without multiple pieces for the fender.
PART STRATEGY	The main strategy for parts is that there is one part - a plastic fender. The fender should be without additional brackets or reinforcements. If this is not possible, then minimizing the brackets that attach the fender to the vehicle is imperative.
TOOLING STRATEGY	SMC molds without lifters is the main tooling strategy. If a die lock condition, than the complexity of the lifter should be weighed against the additional parts that must be added to the fender.
SERVICE STRATEGY	Normal conventional tools for service is the service strategy. The fender should not require special tools for repairing a damaged front vehicle. And the fender itself should be repairable with standard body shop repair materials.

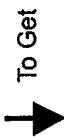


FIG - 311

1.2.4.5 Product Performance Criteria

- System Administration
- Summary Reports
- Opportunity Profiles
- 0 Setup Sheet
- 1 Program Plan
- 1 Business Strategy
- 2 Product Description
- 1 Background Information
- 2 Knowns
- 3 Questions
- 4 Preliminary Plan
- 5 Resolution Required
- 6 Final Plan
- 7 Required Documents
- 8 Program Issues
- 9 Miscellaneous Documents
- 3 Manufacturing Systems
- 4 Program Management
- 5 Supplier Management
- 6 Timing / Scheduling
- 7 Business / Financial
- 2 Product Design
- 3 Dimensional
- 4 Process Design

- Point and Click
- ☒ MAJOR PERFORMANCE REQUIREMENTS
 - ☐ SUB-SYSTEM PERFORMANCE REQUIREMENTS
 - ☐ COMPONENT PERFORMANCE REQUIREMENTS
 - ☐ OTHER REQUIREMENTS



EDIT  ADD NEW  DELETE 

CATEGORY ▼	Enter the major performance requirements. Examples include: <i>Durability, Serviceability, Warranty, Thermal distortion, Weatherability</i>
Durability	The fenders shall withstand 100,000 miles or 10 years
Durability	No cracks or imperfections from hail or stone impingement test
Durability	No damage from hood and door slam test
Serviceability	Replace with standard tools and no fixtures
Serviceability	Repair with standard auto body materials
Serviceability	Sand, Prime, and paint with standard auto body materials
Warranty	IPTV target of 3.0 or less
Warranty	No JD Power complaints
Weatherability	Shall pass xenon weatherability exposure test

- ☐
- ☐
- ☐
- ☐
- ☒
- ☐
- ☐
- ☐
- ☐

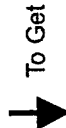
FIG - 31J

- System Administration
- Summary Reports
- Opportunity Profiles
- 0 Setup Sheet
- 1 Program Plan
- 1 Business Strategy
- 2 Product Description
 - 1 Background Information
 - 2 Knowns
 - 3 Questions
 - 4 Preliminary Plan
 - 5 Resolution Required
 - 6 Final Plan
 - 7 Required Documents
 - 8 Program Issues
 - 9 Miscellaneous Documents
- 3 Manufacturing Systems
- 4 Program Management
- 5 Supplier Management
- 6 Timing / Scheduling
- 7 Business / Financial
- 2 Product Design
- 3 Dimensional
- 4 Process Design

1.2.5 Major Issues

- ☐ BUSINESS ISSUES
- ☒ PRODUCT ISSUES
- ☐ DIMENSIONAL ISSUES
- ☐ MANUFACTURING ISSUES
- ☐ ALL ISSUES

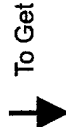
Point and Click



To Get

AP2-I-A1-A	REDUCE BUDGET BY \$50K
AP2-I-A2-A	DIE LOCK CONDITION FORCES BONDED PART

Point and Click



To Get



ADD NEW ISSUE

All users will get this button which will allow anyone to input a major issue to the right area

REQUEST #	MAJOR ISSUE
AP2-I-A1-A	JOE SMITH - ANALYSIS - 248-465-3343
ASSIGNED TO (NAME, DEPARTMENT, PHONE, FAX, EMAIL):	
ISSUE DESCRIPTION:	REDUCE BUDGET BY \$50K
DATE INITIATED:	8/1/00
DATE LAST UPDATE (INDEX REVISION LEVEL OF REQUEST #):	
ORIGINATOR (NAME, DEPARTMENT, PHONE, FAX, EMAIL):	DOUG FINCH - FINANCIAL - 248-465-3899
DATE RESPONSE REQUIRED	9/15/00
ESTIMATED DATE RESPONSE WILL BE ENTERED:	10/1/00
REQUESTED RESPONSE DESIRED:	REDUCE BUDGET BY \$50K
REASON FOR REQUEST:	MEET CORPORATE FINANCIAL GOALS ROLLED OUT ON 7/15/00
STATUS / UPDATES	
PROPOSED RESOLUTION:	
APPROVER NAME:	APPROVED:
APPROVER NAME:	APPROVED:
APPROVER NAME:	APPROVED:

The assignee of this major issue will have the update button appear on their screen. No one else will have the ability to change this screen



UPDATE

FIG - 31K

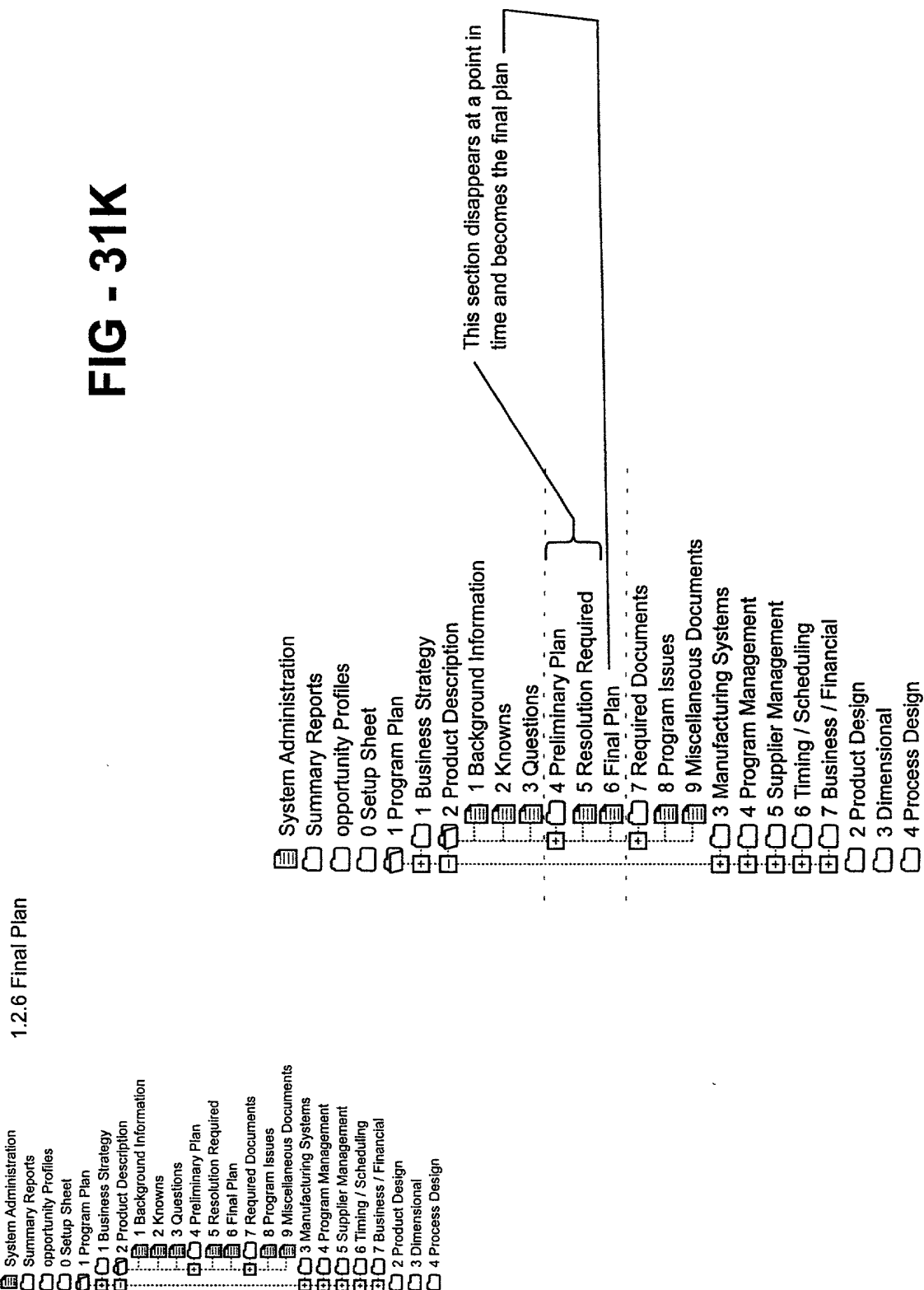


FIG - 31L

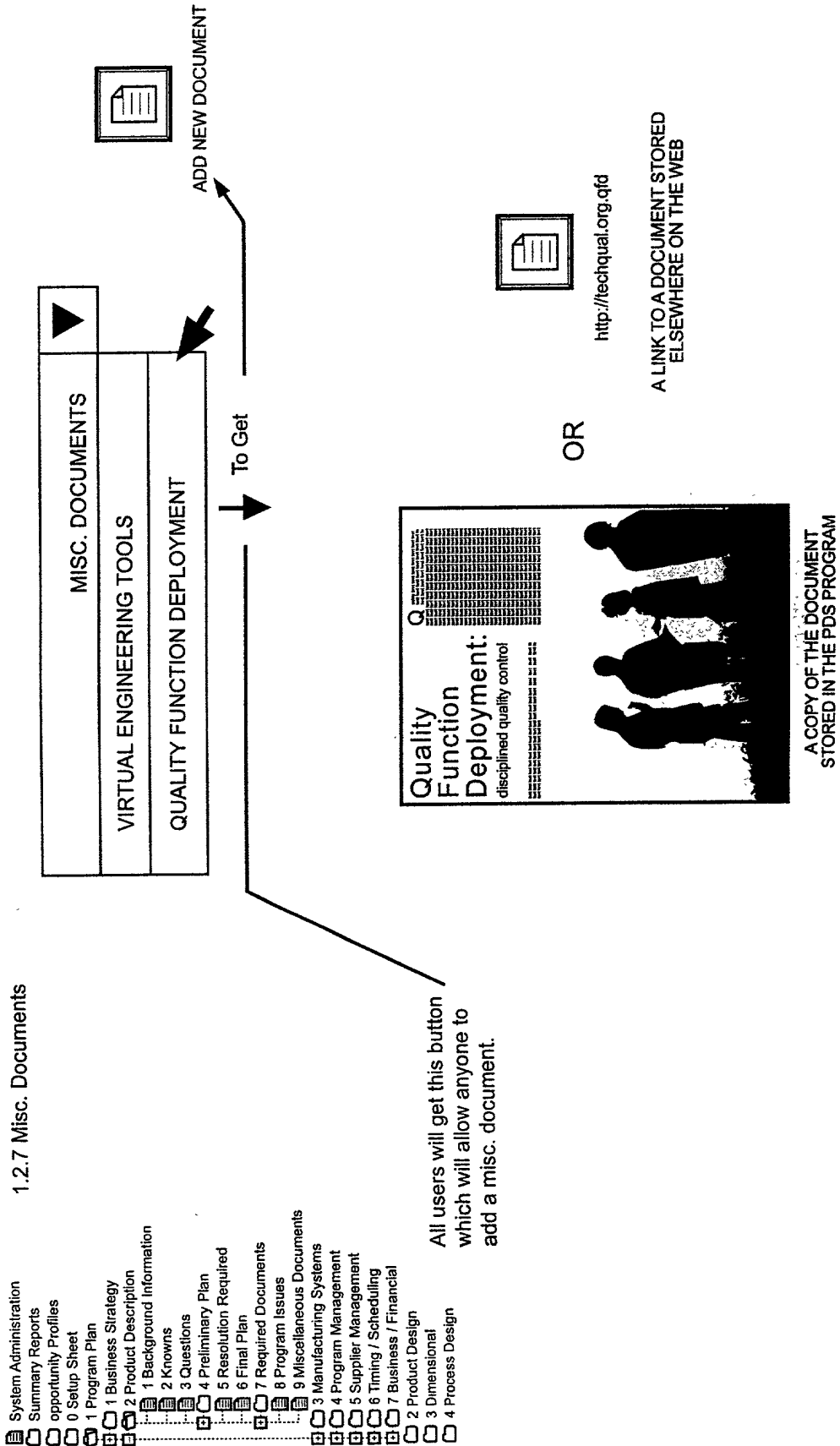


FIG - 32

